# The MAC Flyer

SEPTEMBER 1979

Air of Confidence . . . page 4

**MILITARY AIRLIFT COMMAND**

**GEN ROBERT E. HUYSER** Commander in Chief
**LT GEN THOMAS M. RYAN, JR.** Vice Commander in Chief
**BRIG GEN JAMES L. GARDNER, JR.** Inspector General
**COL RUEL J. NEELEY** Director of Safety

# The MAC Flyer

**THE STAFF**

**MAJ JAMES G. GIBSON II** Supervising Editor
**MAJ ALAN D. YORK** Associate Editor
**CAPT JAMES P. COE** Associate Editor
**LORENA M. GRAUL, CPS** Managing Editor
**BRIAN L. GAUSS** Art Director

For Greater Safety and Efficiency
in MAC Air Operations.

SEPTEMBER 1979 MACRP 127-5 VOL XXVI NO. 9

page 8

page 16

page 24

General Huyser Takes Command ..... 3
Air of Confidence ..... 4
Road to Riyadh ..... 8
The Amazing Shrinking Call Sign ..... 13
The Little Colonel ..... 14
What Use is History ..... 16
Mishap with a Moral ..... 18
First Flight in an Old Bird ..... 20
C.R. Terror ..... 24
Quick Stoppers ..... 28

*The MAC Flyer* is published by the Directorate of Safety, Military Airlift Command, and is authorized until 26 January 1980, unless authorized to continue before that date. The contents are informative and not regulatory or directive. All names of people and places in mishap stories are fictitious; photos of aircraft in mishap stories are representative and not necessarily of the airplane involved. No information in any article may be construed as incriminating under Article 31, UCMJ.

**Contributions, comments** and criticisms are welcome. Write: *The MAC Flyer*, HQ MAC/IGFE, Scott AFB, IL 62225; or call: 618-256-3534, or autovon 638-3534. The editor reserves the right to change manuscripts to improve them or correct technical errors.

**Subscriptions** are available from: The Superintendent of Documents, Government Printing Office, Washington, DC 20402. Price: $1.30 per copy, $15.00 per year (Foreign address: $1.65 per copy, $18.75 per year). MAC units establish requirements for this magazine through their publication distributor (DAPD). Other U.S. Military units should consult administrative directives. Changes of address for subscription mailing should be sent to GPO. Give old and new address, including zip codes.

Distribution F, X; OPR: HQ MAC/IGFE
ISSN 0024—788X

# General Huyser Takes Command

Every time a new commander takes the helm of an organization, there is a certain period of adjustment until everyone finds out what his preferences are and becomes familiar with his particular leadership style. This is especially true at a major command headquarters; where, in addition to "routine" staff responsibilities, it is often the obligation of the various staff members to convey the commander's desires regarding specific mission areas to their counterparts out in the field.

We at the MAC Headquarters have been undergoing this transition phase with our new Commander in Chief, General Robert E. Huyser. Recently, the CINC made the rounds at MAC Headquarters so he could personally meet and talk with each member of the MAJCOM team on the job. During his visit with *The MAC Flyer* staff, he made a couple of points we felt are important to all of us who fly, or support the flying mission in MAC.

Like you might expect of a command pilot with over 8,000 hours of flying time, General Huyser places flying safety right at the top of his priorities. But, coming from a strong background in Strategic Air Command, Headquarters Air Force, and most recently from being the Deputy CINC of the U.S. European Command, the General puts one concern a notch above safety. That pinnacle concern is for security, and it makes sense, because without effective security we could find ourselves without any aerospace vehicles to fly safely.

General Huyser makes it very clear he is vitally interested in seeing MAC people promptly and appropriately recognized when they do outstanding work, but he goes a step further. He views our safe and effective mission accomplishment coupled with superior performance as a direct contribution to our national objectives. This is a strong and positive reflection of the patriotic spirit of each of us in MAC. As an example, safety awards—in the broadest context—are actually a testimony of our conscientious stewardship of precious national assets with which we are entrusted.

What we do from day to day, according to our new CINC, is not just for the benefit of the command or the Air Force, it's vital for our country and all Americans. Now that's something to keep in mind!

**JGG**

# Air of Confidence

**Some bold pilots never get to become old pilots.**

by Maj J. Darrell Lindsey
155 TAS (ANG)
Memphis IAP, Tennessee

"You fellows mind if I join you?" smiled the lanky young man, not really waiting for a reply as he seated himself at the table with the two Air Force types.

"Sure, come on in," Lieutenant Gerry Malone greeted the newcomer. He and Lieutenant Russell "Rusty" Prescott had just grabbed the last vacant table in the busy lounge of the Hotel Condor.

The interloper introduced himself as Shannon McGavock. "Didn't I see you guys getting off of the Herky this afternoon?" he inquired.

"Yeah, we're MACTAC killers," replied Malone, with more than a trace of cynicism. "You ring, we bring," echoed Prescott.

"If I can get El Garcon's attention, I'll stand you defenders of democracy to a round," offered McGavock. "What are you people doing in this part of the world, anyhow? I don't see many of Uncle's military birds in Belize."

"Toilet tissue and ping pong balls for the diplomats," volunteered Prescott. "How about yourself, Shannon? What business are you in, and what brings you to this paradise-by-the sea?"

"I'm flying for Great Circle Airlines. We've had a weekly freight run from the West Coast down this way for about six months now. Getting to be an old Central American hand, I guess."

"How long have you been with Great Circle?" Malone asked.

"Three years. Before that, I put in six years in the Navy — most of it in P-3s — and then this job came along at about the time my obligation was up. You know, for the first three or four years, I figured I'd be a career

## Third Place, 1979 MAC Flying Safety Writing Contest

Navy officer, but the more proficient I became and the more responsibility I assumed, the more garbage I had to put up with. You'd think that an experienced Plane Commander would be given credit for having good judgment occasionally, but there was always some geezer with wide stripes up to his armpits to tell you why you couldn't have it your way. When the Charlie Sierra got eyeball deep to a giraffe, it was time to find another game. That's my life story, gang, and now it's time for Uncle Sugar to part with some per diem money."

While Prescott placed another order, Malone picked up the ball. "Rusty and I were just talking about that sort of thing when you joined us, Shannon. I've been out of pilot school almost a year, and I haven't seen any real flying yet. It doesn't take a Steve Canyon to yank gears and flaps on an airborne trash wagon, you know."

"Know precisely whatcha mean," agreed McGavock.

Having succeeded with the logistics, Prescott rejoined the conversation. "Gerry's right. I graduated third in my nav class and was all set for my choice of assignments. I was spring-loaded for an F-4 back seat, and then the word came down that the 130s were hurting for navigators. Bombing North Carolina with sandbags and punching buttons on 'Big O' doesn't exactly require astronaut potential."

"Well, I was banking on a fighter slot," said Malone, "but almost our whole class drew 130s. The Herk's a super aircraft for the job it's supposed to do, I guess, but like you said earlier, Shannon, there's always somebody telling you what to do. The AC makes all of the decisions, and even the nav runs part of the show on some missions. You can't make a move without consulting somebody. There just isn't much room for an individual to show what he really can do. You know what I mean?"

"Sure do, Gerry," replied McGavock, "I've been there, too."

"It's especially frustrating when you get hooked up with an ultra-cautious crew," offered Prescott.

"Yeah, you oughta have to fly with our AC," lamented Malone. "If he had been one of the Wright Brothers, we'd be hauling freight on bicycles. Just to give you an example, we were down at La Paz last week and in a hurry to get away because of some weather moving in. Well, when Colonel Hardy looked at the Form F, he saw that we were six hundred pounds overgrossed. First, he had the load check his figures, which he verified as being correct. Then we had to wait thirty minutes while the loading crew downloaded an 800-pound crate. All of this time, we were watching the weather roll in over the mountains.

**If you tried to run an airline like that, you'd go belly-up in a week.**

"Can you believe it! A border-to-border runway, an airplane with power to throw away, and we off-loaded a measly 800 pounds!"

"Guys, if you tried to run an airline like that, you'd go belly-up in a week," McGavock responded. "With the competition and the price of fuel these days, you've gotta make every minute and every pound of gas pay. Every delay and every go-around is money down the tubes.

"Fellows, I've enjoyed the company and conversation, but I think I'll pack it in. Where are you going tomorrow?"

Prescott plopped his empty glass on the table. "First stop at Teguchigalpa, then home to Howard. How about yourself?"

"We're making our first stop at Teguch, too. What time are you leaving?"

"0800," answered Malone.

"We've got a 0820 departure," said McGavock. "Maybe we'll talk to you at Teguch. We ought to be arriving at about the same time."

"Sure thing. Have a good trip," Malone replied, with just a hint of envy in his eyes as he watched the civilian pilot stroll toward the door.

"Mornin,' gents," Lieutenant Colonel Bradford Hardy greeted Malone and Prescott as they joined the aircraft commander and instructor navigator, Major David Winslow, in the hotel dining room. Hardy was the standardization officer and Winslow the squadron navigator. Both were experienced veterans of world – wide airlift and probably had more time on final than their young counterparts had in the air. Malone, however, was less impressed with his AC's high time than with his apparent reluctance to "go the limit" to complete a mission. It wasn't

that Malone harbored any dislike for the colonel, who in fact was a personable and considerate leader. The young pilot simply was unhappy with being teamed with an AC whom he felt was unnecessarily cautious. He would have preferred to be paired with one of the squadron's younger, more aggressive aircraft commanders.

After a leisurely breakfast, the crew cleared the hotel and survived a thrill-a-minute taxi ride to the airfield. While Malone and Prescott worked up a flight plan, the AC and senior nav visited the weather people. Although it was a "clear and a million" morning in Belize, the prog for Toncontin International was midway between low bleak and high grim.

"What's the weather look like, sir?" queried Prescott, as Hardy and Winslow came into the flight planning room.

"Not so swell, Gerry," the AC answered. "They're calling for 1,500 broken, 8,000 overcast, four miles, light rain, and winds from the west at 16. Weather's okay at Howard, in case we have to keep on truckin.' "

Here we go again, thought Malone, giving up before we get started.

"Well, we've got minimums, plus a little," volunteered the copilot. "We can hack it, Boss."

Prescott's enthusiasm elicited an understanding smile from Hardy as they picked up their gear and strolled out to the dolphin-nosed transport.

In short order, the Allisons were piercing the air with their unearthly scream, and the brown-and-green machine was winging south over the Gulf of Honduras. Soon after, Great Circle 725 lifted off of Belize International and began its pursuit of the Lockheed airlifter.

The brief overwater portion of the leg was a sightseer's dream, with glistening sea and deceptively serene reefs below, azure sky and brilliant sunshine above. The scenic tour ended rather abruptly, however, as they transited the Honduran coast and low clouds obscured the terrain below. A few minutes after coast-in, both terrain and cloud levels began to rise rapidly.

**Another hundred feet and we might break out.**

Not long after checking La Lima beacon, Malone managed to ring up Toncontin Approach on VHF. The weather had deteriorated only slightly from the departure forecast, but only slightly was enough to provide marginal conditions. The AC frowned as he heard the transmission. "Did you copy the weather, sir?" inquired Malone.

"Twelve hundred and approximately three, wind 280 at 14 knots, and rain," quoted Hardy. "Not so good."

The copilot was not surprised at his commander's observation. "We're still legal, sir," he offered with confidence.

Deep in concentration, Hardy answered with a slight nod.

Just as they began their letdown, they heard Great Circle 725 make contact with Toncontin Approach. I'll bet those guys are figuring out how to make the approach, instead of how to avoid it, Malone said to himself.

The copilot's reverie was broken by Colonel Hardy's request on the intercom, "How about a terrain briefing, Dave?" he asked Winslow, who had offered to give the younger navigator a break on this leg.

"We've got a 6,522-foot peak nine miles east of the approach path and the same distance from the airfield. There's a 7,513-foot peak ten miles northeast of the field, and if we have any problem climbing out on a missed approach, the only escape is up a river valley to the north, VMC only. Terrain to the west is 3,600 within seven miles. That's about it."

Crossing the VOR outbound at 8,000, they heard Toncontin clear Great Circle 725 for the approach.

The AC completed his turn inbound and began descending from 7,500 into the clouds. Light to moderate turbulence was encountered at 6,500 feet, making it somewhat difficult to read the instruments. "Does the radar tell you anything, Dave?" inquired the AC. "This VOR seems to be a little erratic—can't tell whether it's our black box or the station."

The navigator intensified his study of the maze of brilliant returns flashing across the radar scope. "I've got a scope full of stuff, but the clouds are so

heavy, it's pretty hard to break out the ground returns. Looks like we're in pretty good shape, as far as I can tell."

They were now four miles out at 5,500 feet. "How about our drift? Wind seems to be picking up a little."

"The doppler indicates about eight degrees right," replied the navigator. "It's jumped up two or three degrees in the past minute or so."

As they passed through 5,000, Great Circle 725 was calling his turn inbound. "Anybody see anything that looks like an airfield?" asked Hardy.

"Not yet, sir," answered the copilot and engineer simultaneously.

At 4,500 feet, they should have been nearing the approach end of Runway 01. Yet they were still in the gray murk and rain was pelting the windscreen. "What do you think, Dave?" Hardy asked the nav. "Radar any help?"

"I think we're gonna have lunch at Howard, Colonel," Winslow replied.

Quietly incensed, Malone exchanged glances with the junior nav. Why the devil didn't he ask me! he thought. Another hundred feet and we might break out.

"Call missed approach and get us a clearance to Howard," Hardy instructed.

"Roger, sir," said Malone, barely able to contain his disgust.

Before he could initiate the call, however, Shannon McGavock's voice came up. "Approach, Great Circle 725 is passing 6,000. How about a wind check, and give us a report on the status of your VOR, please."

Toncontin Approach replied immediately. "Roger, 725, wind two-seven-zero at one-niner. VOR last reported operating normally."

Malone then reported the missed approach and requested a clearance to Howard. His face turned scarlet with humiliation as a barely audible "Air Force pansies" came over the air.

The Hercules was passing 9,000 feet and angling south when the Toncontin controller called the civilian freighter. "Seven-two-five, say altitude. Do you have the airport in sight?"

McGavock's reply was instantaneous. "We're at 4,500—don't have the field yet. We still aren't sure your VOR is functioning properly. You might want to pass the word on to your facilities people."

Roger, seven-two-five. Report visual contact."

His ego still inflamed, Malone reported climbing through 15,000 and established on course to the Canal Zone. Just as he finished his transmission, Toncontin again interrogated Great Circle. "Seven-two-five, do you have visual contact yet?" McGavock's response. "If we don't see something pretty quick, we're gonna break it off and give it another try."

At least, mused Malone, somebody around here is a little gutsy.

"Roger, seven-two-five." Then the controller's tone changed noticeably. "Advise immediate left turn to three-three-zero degrees; climb to 8,000."

When he realized that McGavock would never acknowledge approach's call, part of a long forgotten passage of scripture suddenly erupted from the recesses of the copilot's memory, and his lips silently formed the words, "Pride goeth before destruction. . . ."

## ABOUT THE AUTHOR

Major Lindsey graduated from Mississippi State University in 1963. That same year he joined the Air Reserves and served as a loadmaster flying AFRES C-119s while continuing his graduate studies at Mississippi State. In 1965, having completed his MBA, Major Lindsey was commissioned through the Air National Guard. He graduated from navigator training in 1966 and flew C-121s and later C-124s. He is currently an instructor navigator with Tennessee ANG flying C-130s at Memphis with the 155th TAS. This is the third consecutive year that Major Lindsey has been a winner in the writing contest.

# Road to Riyadh

**A true account of a not-so-typical airlift mission.**

You see, East Coast crews rarely get to go west, but West Coast crews always get to go east, right? The fact that we were a Dover crew and had been out in the Pacific for two weeks on what was supposed to be a four-day mission might account for the apparent policy. Anyway, we were finally ready to go home. We had gone through two airplanes, two inertial navigation systems, a flap/slat decoupler, a power transfer unit for a hydraulic system that ate hydraulic fluid, one main landing gear that had a mind of its own, three different flap/slat problems, and hydraulic leaks, but we were now ready to press on to Elmendorf AFB, Alaska, from Kadena AB, Japan. The aircraft was in commission, fueled, and loaded. The passengers were on board and the clearance was on request. We were set!

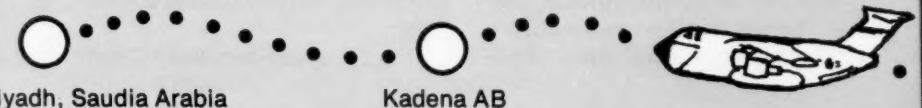
Then it happened. "Airlift Control Center (ACC) wants you to call them," advised the ground-controller. This is the phrase which strikes terror into the heart of any MAC crewmember. Naturally Change Romeo was on its way, but this particular itinerary change resulted in one of the most rewarding missions that most of us had ever been involved with.

The first word was, "Download the passengers; a crew bus is on the way. Have the loadmasters standby to off-load the aircraft, and you're on bravo."

When we reported to ACC, the controller told us he didn't know what was going on but that we were going to be legal at midnight. Terrific, what better time to be legal than 15 hours after you get up from a good night's sleep. We had all been set for an Elmendorf quick stop and on to Dover. So off we pressed to our friendly Billeting Office. (We were on a first name basis with every billeting clerk and bus driver at Kadena.)

Being unable to sleep, we contented ourselves

by Maj Gordon L. Cook
9 MAS
Dover AFB, Delaware



with speculating as to where we were going, why we were going, and most important, if we even *were* going. Most of us finally forced ourselves into bed around seven or eight o'clock to attempt some sleep. Sure enough, midnight passed, along with two, three, four, and five o'clock.

I talked to the primary loadmaster and found out he had been at the aircraft most of the night preparing the load. So, we really were going. But where?

Unable to sleep, we rolled out easily around six o'clock. Still we had no word from ACC. Then around noon we received the call, "ASAP show, ASAP go."

As the loadmasters and flight engineers proceeded to the aircraft, the navigators and pilots were ushered to a back room and told we would be going on what is referred to as a "long haul." It would be a sixteen hour flight during which we would air-refuel with four different KC-135 tankers from Strategic Air Command. Great, a real mission! I had seen two and three tanker formations, but never a four ship. If only my Altus IP could see me now.

After the shock wore off, we began to flight plan. A mission like this is normally set up weeks in advance, but here we were, faced with an ASAP go. What about the tankers? They were faced with the same problem. Would they be coming with us out of Kadena? Where would we meet them? We would be taking off in formation. What!?

The Commander of the MAC unit at Kadena eventually came in and told us SAC wanted to see us on the other side of the base. Sounded good to me, so off we went.

I hadn't seen that many "bricks" in one place in quite a while. Maps were flying around everywhere. Somehow, I was able to meet the tanker leader. I can't recall his name, but he'll always be "Shilo 51" to me. It started off something like this. "Hi, how are we going to work this?"

"Ever done this with a C-5 before?"

"Nope."

"Me either."

"Sounds good."

"Give me a call when you're ready to start."

"Ok. By the way, we changed the AR track."

At this point, my nav's ears perked up. But seeing that we had not had a chance to study the *first* track, no harm.

"You have a map of the track?"

"Yeah, we'll send one over to you in a little bit, soon as it's ready."

"Great, we've got to get back and flight plan this thing."

We worked it out that we would lead the formation with the four tanks stacked up behind us in 500 foot increments and block flight levels 250 to 270.

After we finished flight planning, we had to stop by the mobility unit for a quick processing — mainly to pick up some money we were told we would need. Everything went smoothly. The engineers had checked out the plane thoroughly; the loadmasters had the passengers, meals, and baggage on board and were ready to go.

**Around noon we received the call, "ASAP show, ASAP go."**

As near as I can remember, we were ready to start engines three and one-half hours after show time—an amazing fact considering all the coordination and preparation that had to be accomplished. The hold-up came with the clearance for the flight. What we were about to attempt was a non-stop sortie from Kadena to Riyadh, Saudi Arabia—around Vietnam, Singapore, India, and through the Indian Ocean, with over 100,000 pounds of cargo and 45 passengers. To my knowledge, this had not been accomplished by a C-5 before, let alone with three hour's notice.

Anyway, we had to wait 45 minutes before our ATC clearance was channeled through all the

different flight control areas and approved.

We were still asking ourselves, "Are we really going to do this?" when our clearance came through.

"Shilo 51, MAC 90004, we're starting engines."

"Okay, Shilo flight, start engines."

"Two, three, four, 90." (Shilo 90 was the spare tanker).

The takeoff was uneventful, but must have been impressive because people stopped their cars to watch and individuals lined the flight line. Our problem was Shilo 52, who had engine trouble during takeoff and aborted. However, he was repaired and took off about 45 minutes late. We had to have that last tanker or we'd never make it.

The first air-refueling was scheduled over Clark AB, Republic of the Philippines. We were to take on 70,000 pounds of fuel from Shilo 51 who would then drop off into Clark. Shilo 52 was to take over and carry us to the next refueling, but he was still thirty minutes behind.

As we descended for the first hookup, we coordinated the procedures. The KC-135 slid off to our right and ahead of us while we went after him when he came into view. We were to come off Shilo 51 at our maximum gross weight for flight. The sun was setting, and guess where the AR track was to be? Right, directly into the sun.

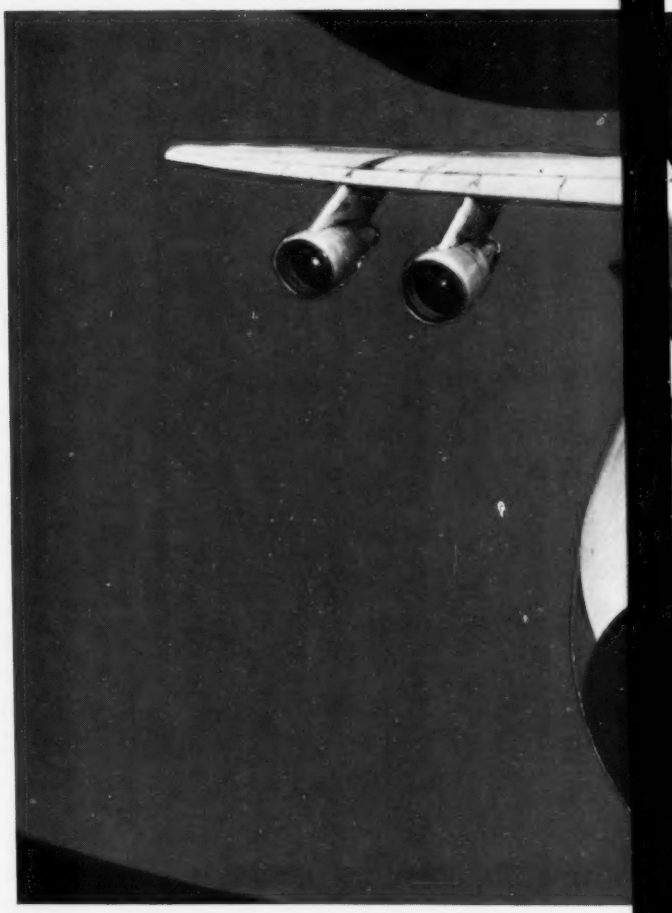
I knew I could not afford to let myself get tired on the first tanker because the next three would be at night, several hours down the road. As it turned out, the weather was ideal for the first refueling. After 20 minutes on the boom we were full of gas but had another 25 to 30 minutes of track time, so we tagged along at flight level 180 and topped off with an extra 5,000 pounds near the end of the track. This later turned out to be fortunate.

The first refueling went so smoothly I began to think the mission was going to be a piece of cake. When the loadmasters asked if they could feed our 45 passengers between refuelings, we had a long time before we hit the next three tankers, so I said, "Fine."

Meanwhile, Shilo 53 and 54 were staggering along several thousand feet above us while Shilo 52 was barreling along trying to catch us. With our weight we could only make it to flight level 220 now, but Shilo 52 was catching us with a 120 knot overtake. We figured that 52 should catch us at the last possible minute—if all went well.

The weather was forecast to be good for the next refueling but the bright flashes in the distance told me it could prove to be otherwise. Another sign that all might not be going that well was Singapore's refusal to accept us at flight level 220. However, they would take us at 270. No chance. In addition, 22nd Air Force had not yet received our diplomatic clearance, so we started working out an equal time point (ETP) between Diego Garcia (God forbid) and our destination. We were assured we would have word on our dip clearance by then.

We had figured out how much fuel we could



take on from the three tankers. The plan was for each one to give us 30,000 pounds. We'd face that problem when it arrived, but in the meantime, we would take all we could get from 53 and 54.

As we approached the second refueling point, the clouds beneath us began rising to our flight level. We had to descend back to FL 180 to refuel because we were so heavy. As the flashes grew closer and the clouds rose, we decided this indeed would be sporty. We changed seats and the plan was to have the first pilot (another air-refueling qualified AC) take the first tanker and I would take the last two.

The joinup was uneventful as 53 and 54 came up beside us. As I said, "Go get 'em," to the first pilot, Shilo 52 was telling us he would be able to make it. Things were beginning to look up. The first pilot took the first tanker as we skimmed along the top of the clouds. This was great because I was in no mood to take all three. As he pulled away from 53, I glanced over to find 54. Of course, he was nowhere to be seen. We had him on radar at about two miles. This was not going to work, so I requested we sneak up to 190 and try to get out of the clouds. Luckily, we were clear but now were 1,000 feet above where I would have liked to refuel at such a heavy gross weight.

We slid over 500 feet below and a mile behind 54 and poof! The tanker pilot called, "I'm Popeye," meaning in the clouds, and I replied, "No kidding." We still had him in sight but closing on a tanker at night in the clouds will give you the best case of vertigo you can imagine. As we closed on 54 some more cheery news reached me. We were twenty minutes from the end of the track. It seems that new AR track cut 15 minutes off the track time. This was going to be fun.

By now, the turbulence was beginning to affect the aircraft. As we approached the KC-135, we bounced around quite a bit, then fortunately, it smoothed out some. When we had nearly finished with 54, when I realized we were "hanging on the fans." We had to watch the power close so we wouldn't over-temp the engines.

Shilo 52 caught up with us while we refueled with 54 and was keeping us in sight. We had about ten minutes to get to 52, hook up and take on 30,000 pounds. By this time we were approaching our max gross weight and frankly, the thought of closing on 52 in this weather did not thrill me.

With the turbulence, flashes of lightning in the distance, etc., all I really needed was some autopilot problems with the tanker. You guessed it. The Shilo pilot called to report a problem with the pitch control of his autopilot.

As we bounced around in the contact position, we were only able to sustain two-to-three minute hook ups. We needed 5,000 more pounds when the end of the track approached. "No problem," 52 said. "We'll do a 360 degree turn so you can get the gas."

Terrific! There's nothing like trying to make contact with a tanker in a turn, near your

maximum altitude.

We finally got that last bit of gas and thanked 52 for all his help and the super effort he made catching up with us. His boom operator must have had nerves of steel. He did a great job.

Leaving the tankers and heading on our way, I knew I had had quite a workout. I realized this when my left hand would not let go of the yoke and I couldn't see the copilot because of the sweat in my eyes.

Our next problem was to try and "make" enough fuel by climbing as high as we could. This proved to be difficult due to the communications problems in that part of the world. When we settled down, it became obvious that we needed to stretch the gas as far as possible. The navigators and engineers went into the performance charts in earnest. We figured we could barely make it if we got our clearances to climb. Finally, we reached Singapore by radio and received our first clearance. From there we dealt with Kuala Lumpor, Bombay, Columbo, and Bahrain radios.

Meanwhile, we still had no dip clearance, and the thought of going to Diego Garcia after what we and the passengers had been through was not too appealing. Twenty-second Air Force was having no luck, but they did offer a hint: we could refile to go up north into Saudi Arabia over the water. Only problem was, we would need more fuel. We were about 10 hours into the flight when we decided the only way to make the new flight plan was to resort to max range cruise. Doing it at that point allowed us to finally stretch our fuel enough to reach our destination.

Meantime, the aircraft started having its problems. Number four engine was running hotter than the other three. A generator had rolled over and died. The navigator's inertial system wanted to guide us anywhere but in the right direction, and the radios were getting worse.

The biggest problem now facing us was getting clearance for our new flight plan. Bombay wouldn't clear us because we were going into Bahrain airspace in 30 minutes or so. Bahrain wouldn't clear us because we were still in Bombay's airspace—it was catch 90004. We finally talked Bombay into changing our flight plan and assured them we would clear it with Bahrain. This occurred within two minutes of our having to proceed to Diego Garcia.

The rest of the flight went smoothly and I hoped everyone up the line had received our clearance change. I nonchalantly reviewed my interceptor visual signals, just in case.

Needless to say, when we landed we were all relieved, especially the passengers. I gleefully offered to buy everybody present a round of cheer—then realized there wasn't a beer within 300 miles. So, as the sun rose over the desert, we all collapsed, and slept well knowing we had really accomplished something. It had been over 30 hours since most of us had enjoyed any sleep, but we had gone nearly around the world to the west. We figured by the time we got back home, we would probably be the first C-5 crew to go all the way around the world the *wrong* way.

## ABOUT THE AUTHOR

Major Cook entered pilot training in 1965 at Laughlin AFB, Texas, after graduating from Otterbein College in Ohio. His first assignment after completing pilot training in 1966 was to Southeast Asia flying C-123s. He later transitioned to C-141s at Norton. After a missile assignment, Major Cook returned to MAC, this time in C-5As. He is presently a flight examiner with the 9th MAS at Dover AFB, Delaware.

# THE AMAZING SHRINKING CALL SIGN

## . . . And other airborne oddities that hinder our air-to-ground communications.

**by Capt Charles M. Westenhoff**
**1868 Facility Checking Squadron (AFCS)**
**Rhein-Main AB, Germany**

Incomplete call signs are one of the biggest headaches to controllers and pilots alike. When Kent 53 acknowledges instructions with a brief "five-three," it's amazing how many other five-threes suddenly appear. When Hank 17 shortens the title to "Hank," all the other Hanks in the world are suddenly talking to the same controlling agency—all on the same frequency. Predictable results include wrong aircraft changing frequency, accepting a clearance, making a turn, climbing or descending. On occasion this results in grave unpleasantness.

The other side of the coin is when you call up on a common-use frequency and don't specify who you're addressing. Sometimes you don't know just who all uses that particular frequency. If you simply call, "Tower, Save 633, five south for landing," you may hear a deluge of arrival instructions from every airport within one-hundred miles.

It's especially important to specify who you're addressing because all those ground agencies can't hear each other. So if you never get who you're talking to straight, the wrong tower could talk to you all day—or at least long enough to spoil your confidence. If you don't care who answers, state "any tower," "any metro," etc. Then whoever answers should identify themselves.

Common-use frequencies have some other built-in problems. Because of antenna position, the controller usually can't hear the other ground agencies on the same frequency. They can't: (1) hear the other tower telling you to make a right 360 and hold west of the field; (2) tell you it wasn't them that told you to do that (3) override other transmissions on the frequency to tell you to break immediately to avoid the incoming 16-ship, same altitude.

In essence, a little misunderstanding can go a long way. The more precise you are in your communication, the more careful you are in identifying yourself and the controlling agency, the less chance of confusion and its attendant gray hairs.

Other potential sources of confusion are the specific words and phrases we use in plane-to-ground communication. Some should be used with great care. Recently, an arriving aircraft reported that he was "clearing the runway." An aircraft waiting to depart keyed on the word "clear," and thought he was cleared to roll. This made things a bit crowded where the arrival was turning off the active and resulted in a very close call.

Except to verify flight clearances, takeoff, approach, landing and other times when a "read back" is required, why use the word "clear" over the radio? Everytime you say it, someone else may think they have received the clearance they are eagerly anticipating, and act accordingly.

Similarly, the forward-thinking crewmember will say "arrival" and "departure" rather than over-use the words, "landing" and "takeoff." Try saying, "When may we expect "departure?" instead of, "When will we be cleared for takeoff?" or, "May we follow the arriving A-7?" rather than, "Are we clear to follow the landing A-7?"

Another phrase to avoid is "not in sight." If the first part of your transmission is clipped for any reason, you've just told the controller the exact opposite of what you meant. So use words like "traffic in sight" and "negative contact" to be clear in meaning.

With a little thought, our radio communications can say exactly what we mean, as well as let the world know that we are professionals. Thinking before pushing that mike button goes a long way toward smoothing our path along the airways and airwaves.

# The Little Colonel

by Maj James G. Gibson II
Supervising Editor

**Every fatal accident is tragic, but one involving a flyer we know seems doubly so.**

I can remember him as clearly as if it was yesterday. A crowd of us were waiting for the shuttle bus that ran from Spokane Airport out to the survival school at Fairchild AFB, Washington. He was about the shortest bird colonel I'd ever seen, and he was passing the time talking to one of the tallest light colonels I'd ever seen. A real Mutt and Jeff combination they made.

Thinking that the short fellow's face looked familiar, I moved close enough to catch a glimpse of his name tag. At a range near enough to check it out, I could also overhear some of his conversation, and it centered on his dissatisfaction with being transferred from a fighter squadron to helicopters for a tour in Vietnam. Oh, he didn't mind going into combat, but he sure wasn't tickled pink at the idea of doing his stint as a white knight in whirleybirds.

Putting some bits of his conversation together with the monicker I was able to make out on his blue-plastic identifier, it soon came to me that the compact-model colonel had been commander of an F-106 squadron located at the MAC base where I'd been stationed as a C-133 navigator for the past four years. I'd seen his name and face in the base newspaper on many occasions.

Later, when his conversation with the tall colonel tapered off, I introduced myself and we exchanged the usual amenities of two Air Force types who have been assigned to the same location.

After the bus ride out to Fairchild, I didn't see the colonel again until the mock prisoner of war compound portion of the survival school program. He turned out to be the senior ranking officer for the group of "prisoners" I was in. The "guards" put a beret and a heavy coat that was about four sizes too big on him—the sleeves were so long his hands didn't even show out the ends—and then they proceeded to mock and belittle him in front of the rest of us at every opportunity. He would stand calmly and apparently unperturbed by their harangues. His sharp little eyes looked most of them about in the shirt pockets, and they didn't miss a chance to make fun of his short physical stature along with everything else.

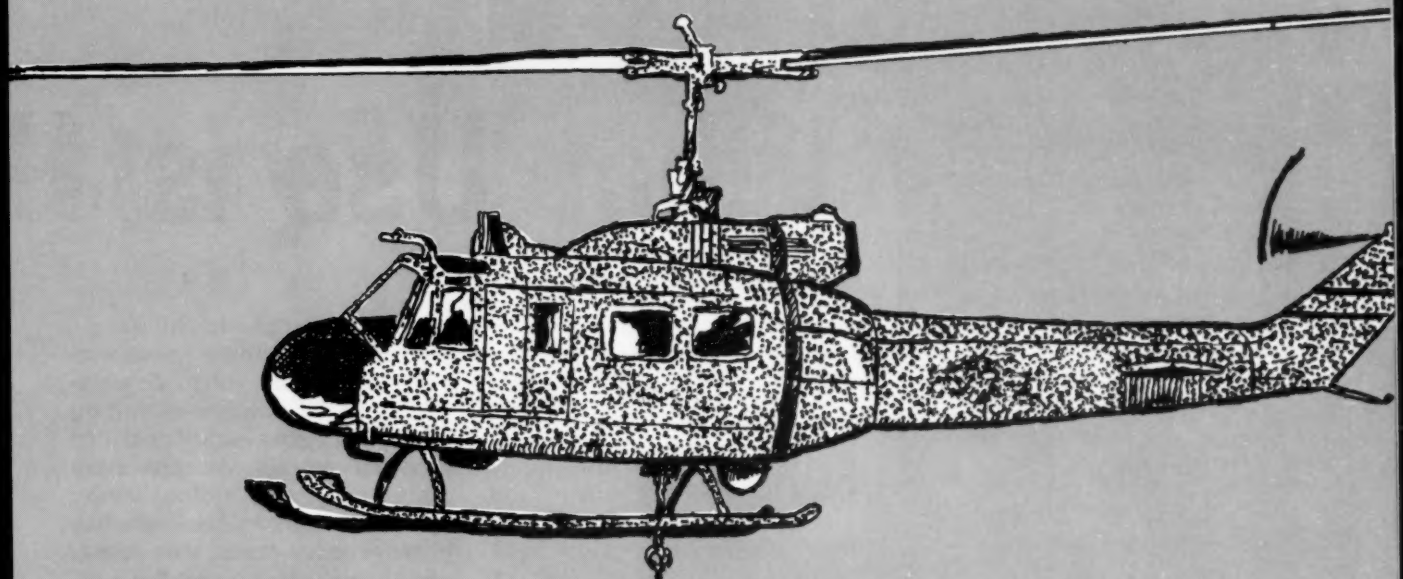
Try as they might, though, the guards couldn't visibly ruffle the little colonel in the least; and every chance he had he was moving among us fellow "POWs" with encouragement and moral support that he offered in a quiet, but powerfully reassuring manner. By the end of the POW compound scenario, the combination of his calmness under pressure and natural leadership had all of us completely under his spell. He said less and led more effectively than anybody I have met before or since, and there wasn't a man among us who wouldn't have willingly followed him into the labyrinths of Hades in pursuit of the devil himself.

When survival school was finished, we all went our separate ways to a variety of assignments in support of the Southeast Asia war effort. I wondered at times where the little colonel ended up in Vietnam, and how his helicopter assignment had turned out. I really expected to see his name on a general officer promotion announcement one day, but fate had other plans in store for him.

It was about six months after I arrived at Clark AB, in the Philippines, for duty as a C-124 navigator, that I found out what had become of the colonel. The article was in *Stars and Stripes*, buried on an inside page under a terse, one-column headline about a helicopter crash in the Delta region of South Vietnam.

Seeing that familiar name as one of the casualties had the impact of a sudden and unexpected fist in my solar plexus. I reread the article hastily several times before fully and finally convincing myself that one of the unfortunate pilots was indeed the little colonel who had been our SRO at survival school.

Of course, I wanted to know about the circumstances of the accident but details were hard to come by. Since he was an advisor to a Vietnamese flying unit, the accident report wasn't handled through the usual GI channels. Eventually I did dig up some information, though, and it revealed that he didn't get bagged while leading a Huey gunship charge against the Viet Cong, or while trying to pull a downed flyer to safety in a Jolly Green, as I might have suspected. No, his

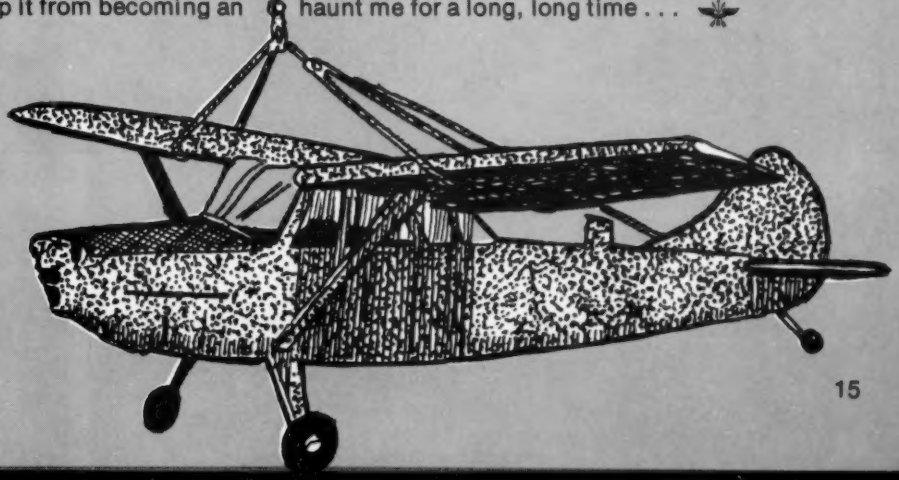


chopper was literally lassoed out of midair on what should have been a fairly "routine" helo airlift mission.

It seems the chain of events that lead to the crash began when a Vietnamese 0-1 went down in a field near the base where the little colonel was serving as an advisor. The small spotter plane wasn't badly damaged, and the Vietnamese B/G who was the local air division commander wanted it recovered ASAP. Becoming impatient after a couple of days, the general, who was a high-time, hot-stick helicopter pilot, came into the colonel's office one morning and indicated that he was going to go out in a Huey and pick up the 0-1 himself. Never one to sit idly on the sidelines (especially in the face of what amounted to a challenge from the general), the colonel grabbed his hat and off they charged.

With the Birddog located only a mile or so away from their base, picking it up looked like a piece of cake. Actually, it was *too* easy. In the process of rigging the grounded spotter plane for such a short distance airlift, nobody concerned themselves with the added bother of attaching spoilers to the lightweight 0-1 to keep it from becoming an airfoil. Liftoff was routine, and with their payload dangling underneath, the general and colonel headed back toward their Delta outpost. They almost made it too; but within sight of their destination, payment-in-full came due for that seemingly unimportant oversight regarding the spoilers. Suddenly the 0-1 began trying to fly as they dragged it along at 30 to 40 miles per hour, and before the pilots even had a chance to realize fully what was happening, the strain on the towing cable became too great. It parted, and whiplashed up into the Huey's rotor blades. Quicker than a wink, the steel strand fouled itself in the rotor mechanism, the chopper tumbled to the ground and was reduced to a heap of smoldering wreckage.

We lose good people in *every* fatal crash, but the full impact of that kind of loss doesn't really come home completely until someone you have known and respected buys the farm. It has now been over seven years since his fatal accident, but I suspect the implications of the needless death of that feisty little colonel whose path briefly but indelibly crossed mine during survival school will haunt me for a long, long time . . .



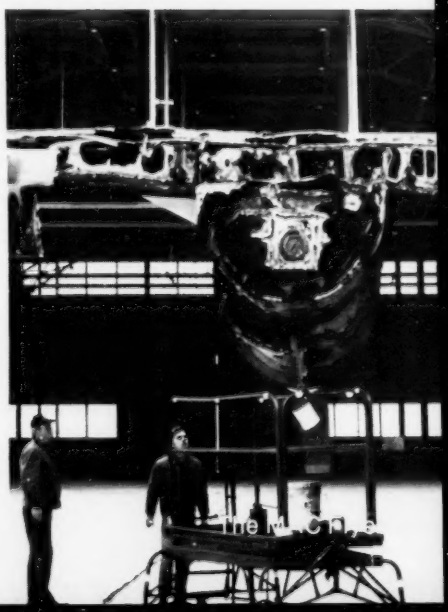
# What Use is H

What causes a crew to take off with the gear pins installed and continue the flight? How about the crew that flies too low and too fast during a training exercise? How many crews fail to check notams, and find themselves on final with no PPR number and no extra fuel? Or what causes a pilot to continue an approach below minimums after losing sight of the runway? And how about the crewmember who feels it's not necessary to strap in, wear protective equipment, or use a checklist?

What causes maintenance personnel to disregard tech data, fail to check the aircraft weight and balance forms, or sign off an inspection without insuring that the airplane is put back together correctly and all the tools are accounted for? And what causes the expediter to forget that he has a work stand hitched to his truck as he drives under an aircraft wing?

To answer these questions would require long dissertations, and we've been writing them for years—they're called mishap reports. People make mistakes, and almost every mistake that can be made has been made—more than once. Fortunately most have been recorded because, in a real sense, safety *is* history. Wise people review past performance, good or bad, for the lessons to be learned. The unwise say, "I don't care what happened the last time someone tried that. I've got a job to do," and they ultimately repeat history.

They might fail to selectively man the crew on a demanding mission just to "cover that sortie." They may decide that torque wrenches are for use only when QC is around. They may ignore the practice of emergency procedures. They may make light of crew rest requirements



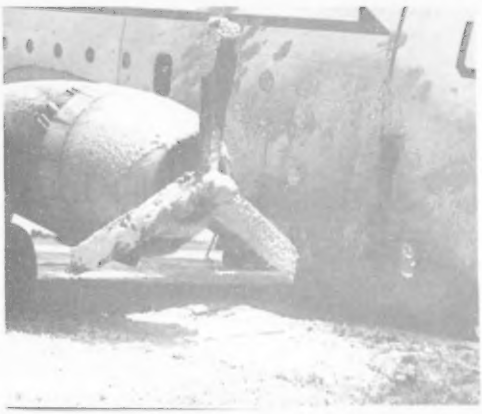
# istory?

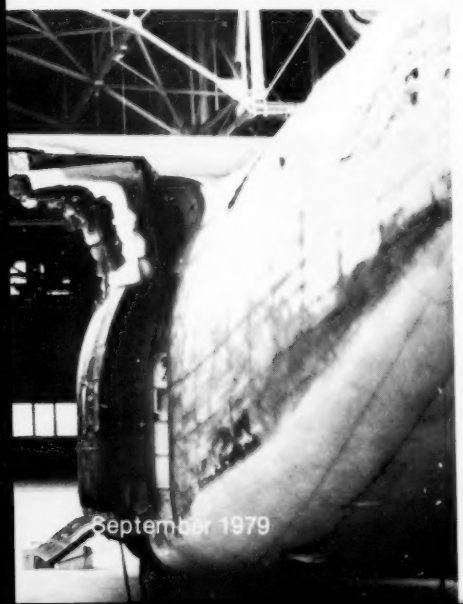
when the schedule gets tight. Or they might simply lower the ramp without making sure it's clear underneath.

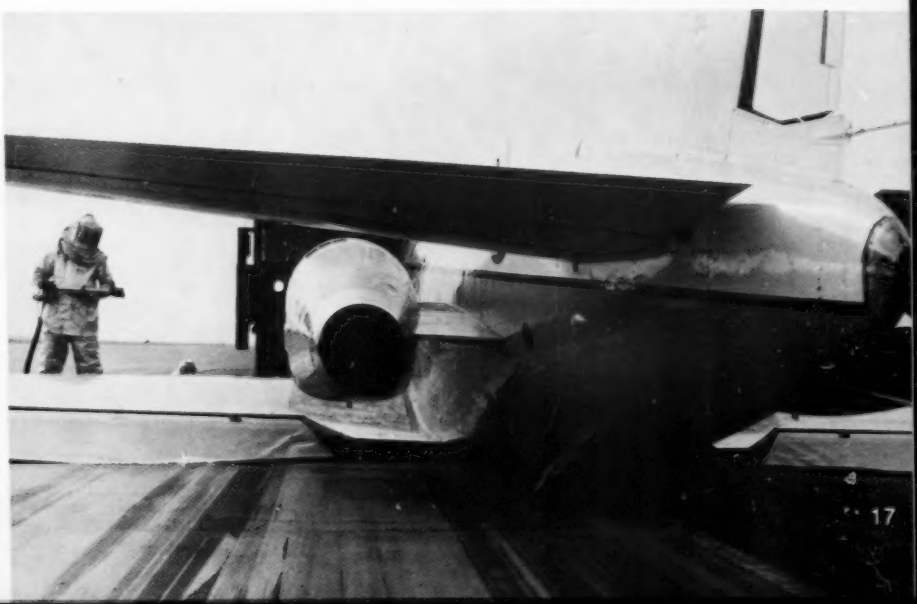
"Needless accidents!" we cry. Are we sure that our attitudes about safety didn't help cause them? People are creatures of habit. We must ask ourselves if it's our habit to be safe. Do we promote safety and set a good example for the people who work around us or for us? We can probably think of reasons why we *don't*. Are they valid?

"For want of a nail the kingdom was lost." says the old maxim. "For want of a cotter pin the airplane was lost," could be a newer version. Does the safety program in your work center, your office, your squadron reinforce good practices, procedures, and habits? Does it remind people of possible pitfalls? Does it review its history? If not, what good is it?

—Adapted from *Approach*







## Mishap with a Moral

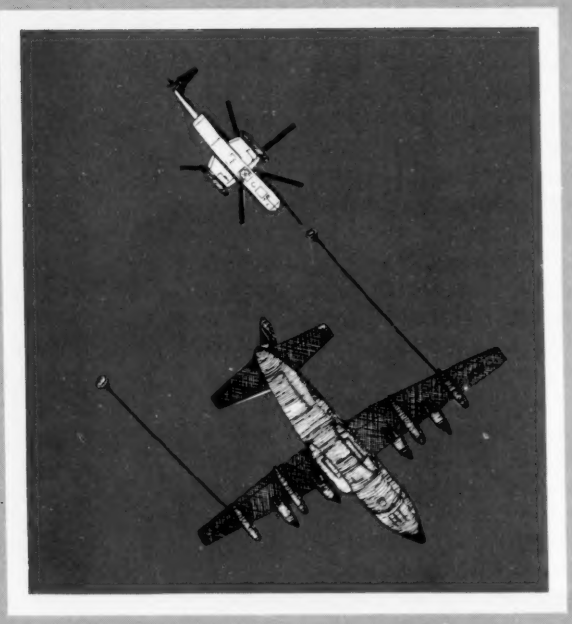
# How Far is Too Far?

The aerial ballet that occurs when a Rescue HC-130 refuels a Jolly Green Giant helicopter in flight is an amazing sight to see. With the Herk operating at the low end of its speed range and the Jolly charging along about as fast as it can go, the unlikely duo is just able to get close enough to each other and stay that way long enough to transfer the desired quantity of JP-4.

Watching the hummingbird-like approach of the helicopter as its long proboscis of a refueling probe stabs at the HC-130's extended drogue basket, it is very easy to envision several possibilities for disaster. Most obvious, of course, is the fact that only a few feet above the refueling hookup equipment of the two aircraft are the helicopter's slashing rotor blades. Although the Jolly's fuel probe telescopes out to a maximum length of four feet beyond the rotor tips, there is still relatively little room for any false moves.

Miscalculation is rare in this demandingly precise operation, but despite a long and enviable safety record for Herky/Jolly aerial refueling, mishaps can happen. On a recent refueling training mission, it did happen, but the initial situation wasn't as instantly disastrous as might have been expected. The final outcome however, was extremely tragic. That grim finale raises some pentrating questions; but first, we need to take a look at the mishap itself, which occurred during the practice overwater refueling mission.

Having made several successful hookups on the left side of the Herk, the pilot (who is out on an evaluation ride with a flight examiner in the left seat) maneuvers his Jolly into position for some practice hookups on the HC-130's right wing refueling drogue. He makes a stab at the basket, misses and falls back to a position somewhat below and behind the normal precontact location. Quickly regrouping, he adds power to accelerate and gain altitude for another contact attempt. As he moves in, he reduces the climb rate by applying forward cyclic, but does not reduce the power.



Suddenly the Jolly is accelerating too rapidly past the drogue basket. Seeing this, the flight examiner warns, "Hey, don't undershoot," but doesn't interfere. Aware that he is about to blow a second approach, the pilot raises the nose of the helo to slow it down, banks to the left a bit and rapidly lowers the collective.

From his vantage point in the open troop door of the Herk, the scanner sees the disastrous result of the abrupt collective change as the chopper's blades dip and slam into the air refueling receptacle. Fuel sprays from the severed end of the refueling hose, and it automatically begins to reel back into the HC-130's under-wing pod.

Vibrating badly because of its damaged rotor blades, the Jolly is maneuvered by the crew toward a nearby island. Despite a severe lateral shuffle and a cluster of illuminated warning lights that make the caution panel look like a pinball machine, the pilot in command elects to try and limp 12 miles to terra firma, rather than ditch. Together, he and the right-seater wrestle the injured chopper to within a mile of shore; then suddenly the tail boom separates. With the tail rotor gone, the center of gravity shifts forward drastically and all control is lost. The Jolly plummets nose first from the sky and crashes in the shallow waters of the island's offshore coral reef. Miraculously, a third pilot who is on board in the rear of the chopper survives virtually unscathed, but both pilots and the flight mechanic up front perish.

Normally, our *TMF* mishap reports have clear-cut lessons, and in true Monday-morning-quarterback style, we point them out. In this case, however, what we end up with instead of glib no-nos are a couple of sets of questions involving some general principles. We suggest you formulate your own answers and then stow them away in the back of your mind for the time when you must make a critical decision that may result in survival or doom for everybody on board your aircraft.

The first questions pertain mainly to you in the role of aircraft commander, instructor or flight examiner, and they hinge on this: How far will you let a pilot, student, or examinee go astray with a maneuver before you take the controls? Would you, for example, have let the pilot in this mishap attempt another hookup from a less than ideal position right after he blew one? Or, would you have let him try, and then taken over when it became obvious he was coming in too hot? Just what is your personal safety margin in any given situation?

Second question is: Do you know when to throw in the towel? How long, for example, would you "tough it out" trying to save a really sick air machine before deciding to set it down someplace — even if that someplace was in the water? The pilot in this mishap elected to play the odds and tried to keep going in an attempt to reach a more ideal site for landing — and he *almost* succeeded. It is impossible to say that he would have fared any better had he ditched while the chopper was still reasonably controllable, but the question remains: How far would you stretch *your* luck by pressing on with a damaged aircraft while you have the option of setting it down with a reasonable amount of control?

The answers to both these sets of questions depend on a variety of conditions and factors which you will have to take into account at the time you are faced with that ultimate challenge. Will you, having gone over as many of the "what-ifs" as possible beforehand, be mentally "up" and make the best decision; or will you be caught unprepared?

# First Flight in

**A glimpse at what airlift might look like in the future.**

It was my first live ride in the old bird, and by tradition the Chief of Standardization was the AC. This, the reasoning went, gave new pilots the best possible start—a standard with which to compare subsequent aircraft commanders. The ride would serve as my initial copilot checkout. It would also be my one "live" mission—barring the start of war—for the next 12 months.

All briefed and filed, we headed for the aircraft. The pinger crew had just finished their check. With all the professional coolness a brown bar could muster, I strolled over to the pinger team chief and asked, "How's it sound?"

"Pretty good, sir," he answered. "Looks like a small fracture plane about 160 inches out on the left main spar, but it's in one of the modified areas and doesn't go through either cap, so you're okay."

"How many doublers do they have on that spar by now?" I asked.

"Quite a few, sir," he grinned. "It's an old tired bird with cracks in its bones. A real jet-age Gooney Bird."

I laughed with him and quickly retreated, my "old hand" act exhausted. What the hell was a Gooney Bird? I made a mental note to ask the AC once we were en route.

Lieutenant Colonel McPherson was now through with her own inspection (though what she expected to find that the pinger team and 14 other ground crew members missed I can't imagine) and was strapping in. I followed suit and we were ready to tow. The big solar powered tug eased us smoothly out of the chocks, on time. I called for the clearance.

En route to the runway the colonel turned to me. "Did you know we used to start engines in the parking spot and free-taxi to the runway?"

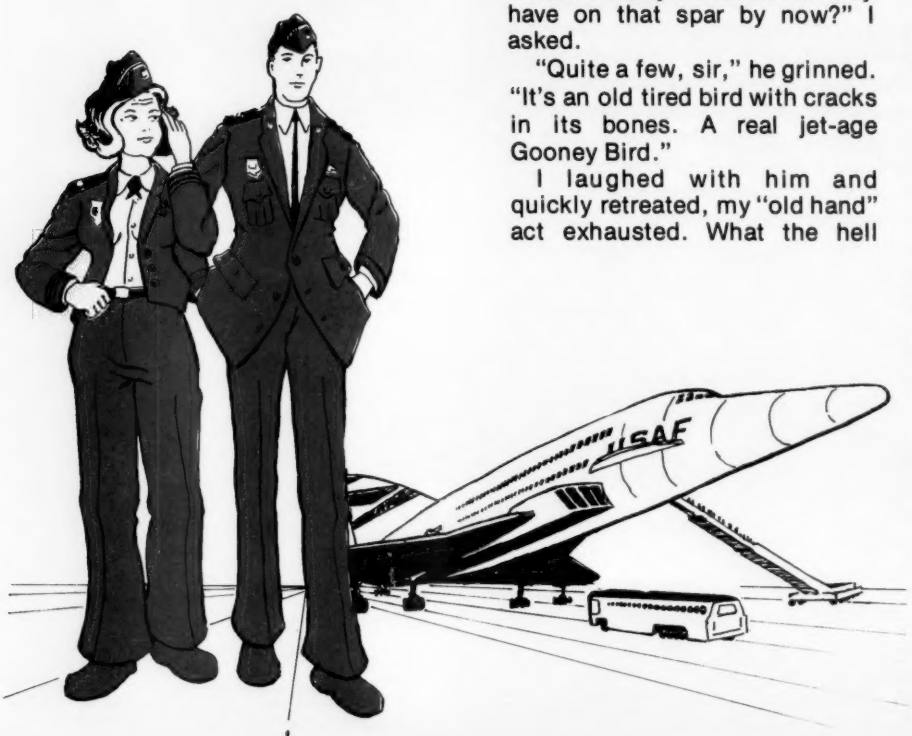
I was incredulous. All that wasted fuel, not to mention the danger of maneuvering such a large aircraft in the relatively close quarters of the parking ramp. "Wasn't that awfully dangerous?" I asked.

"Well, it shouldn't have been, but every now and then someone would run into something."

"How in the world could that happen with wing walkers and nose and tail spotters?" I questioned.

"Would you believe, we didn't have to use wing walkers unless we were within 25 feet of an obstacle?"

I tried to picture free taxiing without wing walkers. "But when you were within 25 feet and had some walkers, then how



# an Old Bird

could you run into anything?"

"I think our clearance is ready," interrupted the colonel.

We were cleared for brake release on the hour. The tug towed us into place on the end of the runway and waited for us to start engines. That would take place exactly five minutes before brake release. Meanwhile, the next-to-last-chance crew swarmed around the aircraft making sure gear pins were pulled, tires hadn't been cut during the tow, nothing had been blown into the intakes, and so on. After engine start, the last-chance crew would get their turn. The crews swapped jobs every month and the "last" crew collected a case of brew from "next-to-last" for anything that got by the latter. I heard that actually happened once, a few years ago.

I called Center after raising the gear.

"Good evening," said a cheerful voice. "Didn't think it was that time of the month already."

"Once a month, whether we need it or not," I gave the traditional reply. It would be my only communication with the controller until we were handed off to Honolulu Approach, unless something unusual happened.

After level-off, while drinking our coffee, the seasoned lady commander began again. "I remember when we used to fly maybe 15 or 20 missions a day out of Travis alone, instead of one a month." I tried to picture the swarm of people, planes, cargo, and trucks that such an effort would entail. "Of course, that was back before the real energy crunch. We had company up here then, too. The commercial airlines had a fleet 20 or 30 times MAC's size. Then there was the general aviation fleet, over 250,000 private and corporate aircraft. It made for a pretty crowded sky, especially around terminals. But the worst thing was that some of the planes weren't even under radar control."

**"I remember when we used to fly 15 or 20 missions a day out of Travis, instead of one a month."**

"You're kidding!" I exclaimed.

"Nope. You had to watch out for 'em all the time, even when practicing instrument work. Every so often someone didn't and there was a midair collision." I had heard of those—the last one had happened only 12 or 13 years ago. I suppressed a shudder.

"Another problem we had was altitude control. Sometimes the only thing that stood between you and the ground was hearing an assigned altitude correctly, reading it back correctly, and the controller hearing what you actually said instead of what he expected you to say. Sometimes that chain broke down, and then we flew an airplane into the ground," she explained.

I was getting a little pale. "But why in the world would a pilot fly lower than the minimum sector altitude, or the minimum obstruction clearance altitude?" I wondered aloud.

"Sometimes they didn't bother to check it," she said. "And sometimes they got the assigned altitude right but flew through it because they were distracted."

"What were they doing with the radar altimeter?" I asked.

"Well, they didn't have to reset it and call every thousand feet from five down, the way we do now, but they did have a radar altimeter. I really don't know. Another amenity we didn't have was computer enhanced ultrasonic structural testers."

No pingers? Just how old is this woman I wondered? Those things had been around since the early nineties, at least. "Then how did they know when a crack developed? How did they know where to reinforce a spar?"

"This was back during the old bird's design lifetime—when there weren't many fatigued structural members and usually the ones you found were pretty noticeable. Just after I started flying, they found a cracked frame around the windshield when one failed on climbout."

I gave a low, respectful whistle and remarked, "That was

a pretty tough way to find bad structure."

Unexpectedly, center called, "MAC Six, we're showing rapidly increasing headwinds at your level in about 150 miles, but well stratified. Computer says a 1,500-foot descent is most economical. Descend and maintain flight level 435." I read back the altitude and began a slow descent.

"You know, when I began flying the line," the colonel continued, "there weren't any satellite weather stations—just photographic platforms—so the first you knew of a windshift was when your groundspeed dropped. And sometimes the actual winds were as much as 50 or 60 knots worse than forecast. To protect against that, we carried an extra 10 or 20 thousand pounds of fuel, and there were times when you needed every bit of it."

I reflected on that for a moment: that extra five or ten tons of pad probably cost an extra two tons of fuel burned to carry it across the ocean—an absurd situation today. Our fuel for this mission, of course, was figured to the pound, with one hour of holding on the end for emergencies. Initial cruising altitude was always FL 450—easily reached even with the max payload we always carried—and any descents were parceled out by center only if the increased groundspeed would more than offset the known increase in fuel consumption at a lower altitude. In fact, a 1,500 foot descent was said to be quite large.

Lockheed's ageless airlifter sailed on. In the smooth, clear air at FL 435, I was struck by the resemblance of our flight to what I'd seen some two-dozen times in the simulator. The vivid blue sky, etched blue-gray of the ocean eight miles below, scattered clouds a few thousand feet above the surface—all were exactly as I'd seen them before in the box. Impressed, I mentioned this to the colonel. She looked pained.

**"No pingers? How did they know when a crack developed?"**

"So glad to hear that, Lieutenant, but I'm afraid you're a little confused. The simulator duplicates real life, not the other way around." I thought that over as she continued. "I can see how you young people feel that way, though. Eighty hours in the box, with exact visual and exact motion, complete through landing roll, before your dollar ride. Did you know they used to put new pilots up live after only five simulator rides?" I shook my head in disbelief. "It's true. They got their first landings in the real aircraft. The old simulators didn't have any visual, and the motion was pretty crude, so new flyers just bounced five or six live ones on until they got the hang of it."

Once again I felt the now familiar awe at those early aviators. I knew how the simulator had reacted to my first landing—the horizon-to-horizon visual is even more impressive than the motion—and I tried to picture a thousand-odd tons of airlifter going through the same gyrations. I imagined a drunk elephant on roller skates. Besides, how did they demonstrate hydroplaning, or an outboard engine failure on a short field, or wake turbulence on final, or any of a dozen other emergencies you had to have visual reference for? No one in his right mind would deliberately fly such maneuvers, but it was inconceivable to make someone a copilot—let alone an AC—unless they could successfully handle such situations. I was baffled. "Sounds awfully dangerous," I managed, finally.

"Actually, training was our safest operation. Never had a major accident in all those years of 'bounce-and-goes,' probably because the instructors operated under the basic premise that all students were out to kill them. It made them very alert, very professional. Where we got in trouble was flying the line. Flying to the same bases sometimes created a feeling of 'it can't happen to me,' at which point it usually did. People kept making the same mistakes over and over again. But finally, slowly, like the campaign to reduce smoking or air pollution, we began to see

some results. As you probably know, next August, if we keep up our efforts, MAC will be ten years accident-free."

Our conversation was ended by the East Pacific controller clearing us for descent to Hickam. I acknowledged and the colonel called for the descent checklist. At the end, under "Circuit breakers—checked," we found our first real problem of the flight: the breaker was popped on the bird chaser.

For those of you who don't fly jets, a bird chaser is a device similar to radar, but it doesn't receive, it transmits on three slightly different frequencies around 10gHz, in a cone along the aircraft's flight path. The frequencies correspond to a wave length about the size of a bird's head, and any bird touched by the beam wants to be somewhere else in a hurry.

The last MAC accident, nearly ten years ago, was caused at least partially by an inoperative chaser. The accident aircraft had shut one engine down at altitude for low oil pressure and was six miles out on final when it flew through a large flock of starlings and lost two of the remaining three engines. The AC managed to keep it flying until reaching the fence, and fortunately was slightly off centerline when the aircraft hit, shearing three approach light towers with the left wing. (They used to have the approach lights mounted on steel towers just off the overrun. Incredible!) Thanks to a thorough preflight briefing, 24 out of 27 passengers and crew got out with only minor injuries before fire destroyed the aircraft. Investigation showed the bird-chaser circuit breaker had popped sometime after takeoff.

A freak accident? You bet.

**Any bird touched by the beam wants to be somewhere else in a hurry.**

Every accident in the last 15 years has been just as freaky. But it *was* preventable, and the supervisors bought it with design as a contributing factor. So now we check circuit breakers before descent and restart any engine that's been shut down for low oil pressure if the computer shows we're more likely to lose one of the other engines than to damage the idling engine through oil starvation. If we do get in a bind, we've got that engine going when it's needed. Oh yes, we also have a bird-chaser-inop light added to the caution panel.

All of these were easy fixes, and obvious, too—at least with the benefit of hindsight. But why did it cost three lives and an airplane before they were made? Of the hundreds of crewmembers who must have stumbled onto one of those ideas years before, why didn't one write an HR, or an 847, or at least talk to the safety officer?

A question from the "old lady" brought me back to reality. "What would you do about this popped circuit breaker if you were the AC?" she asked. Fortunately, the last weekly situation exam had covered a similar predicament.

"I'd look in the relative risk tables in 55-1 to see if we're more likely to suffer a critical bird-strike if we leave the chaser off or start a fire if we reset it." Nothing like a textbook answer to a flight examiner's favorite weird question.

Well, the book said "reset," so we did. The remainder of the mission—including my first live approach and landing—was strictly routine. But it was a couple of days before I digested what all I'd learned.

For one thing, I had a new respect for anyone who'd lived through those hazardous years of the early jet age. Flying was really dangerous back then. And I had a better feeling for the "why" behind some of our current procedures. Not only that, but finding out what a Gooney Bird was only cost me a couple of drinks that evening.

*This article was adapted from a story that first appeared in the August 1974 edition of* The MAC Flyer. *It's messages and setting seem particularily appropriate for some of 1979's missions and challenges.—Ed.*

# C.R. TERROR

**The Ace of Aerospace learns that a flight that becomes a comedy of errors is no laughing matter.**

This computer flight plan is a little bit old, boss," said Sam to C.R. who was seated across the flight planning room. The Goldbricking Greenbagger puffed idly on a gold-ring Egyptian Oval while the copilot struggled with twice the usual paperwork and wished he had Blinky along to navigate instead of a black box.

"No biggie," returned the Flatulent Flyboy, "just hop on over to the weather shop and have the first forecaster you find update your winds. Anything within 30 knots and 180 degrees should be close enough for government work, heh, heh!"

Dutifully, the conscientious copilot trudged out of the room and headed for the weathermen's counter. He returned a few minutes later looking somewhat perplexed. "They say they don't have any current info for the leg between here and Hickam, boss, but they are expecting an update in about 45 minutes."

"Can't wait that long, m'boy, for what probably won't amount to any more than a two-percent difference in the overall wind factor at the most," pronounced the Paunchus Pilot; adding as an afterthought, "Just figure out your fuel load requirements based on the data you have there and then add on a few pounds of unidentified extra for mama and the kids—we'll be fine."

Sam was refolding the last enroute chart to go back into the rack on the flight planning desk when Sergeant Torque stuck his head in the door. "Maj, we've got problems with the radar, and maintenance says they're gonna have to put us NORS for parts for at least 24 hours if we don't come up with an alternative."

"I'll take care of this matter, my fine-feathered friend; have no fear," boasted C.R. "We've done enough of a stretch here on the "Rock" for two trips, and I am ready to depart post haste. Even the quaint charms of Agana City are beginning to fade."

•••

"Sure, Major Terror, I can get you a waiver to press on without a radar if that's what you want," offered the captain at the duty controller window, "but what about the weather between here and Hickam?"

"Hot and dusty all the way," bluffed the Overconfident Oceaneer. "Besides, the last

satellite picture (which C.R. neglected to mention was now more than 12 hours old) shows nothing but scattered ocean cue and one or two isolated buildups. So call the waiver givers and let's get my little dog and pony show on the road."

"One waiver, comin' up," returned the copacetic captain, but just remember, all the waiver does is give you the right to wipe yourself out legally."

Out at the Starlifter, things were dragging along at a snail's pace. First the refueling truck pump broke down, and then fleet service was late with the flight lunches. Just about the time C.R. was finally ready to block out, he was put on hold for a surprise, multi-ship B-52/tanker launch exercise. After what seemed like forever, he commented to Sam that they were getting close to crew duty limits for making the seven hour and 30 minute leg to Hickam. Just as he finished making this observation, the MAC command post came up on VHF, "Looks like you're gonna be real skosh on crew duty limits by the time the buffs and tankers get off, Major Terror. What do you think about putting an extension on order just in case?"

"Your timing is exquisite, captain," said C.R. sardonically, "Do it!"

The last tanker in the big SAC gaggle was finally reappearing on the horizon after battling to regain the altitude lost from the 600-foot decrease in ground effect off the end of Guam's runway 06R when the Ace of Aerospace got permission to guide his C-141 into takeoff position. "Guam is good," he observed as the wheels entered the wells with a solid but comforting thunk, "but Hickalulu is heavenly, and I am glad to be on my way there at last."

"Amen, bruddah," echoed Sam in his best Pidgin English.

About five degrees of longitude past Wake Island, which was almost midway in their journey, C.R. called the loadmaster and asked for the flight lunches to be broken out. Sergeant Downs soon appeared with two of the familiar white boxes and a worried look on his face. "Sir, take a look at the expiration date on this chow," he said, passing a container to the AC. "Unless I read wrong, this expired over three hours ago, and all the others are the same. Do you think they're still safe for us and the pax to eat?"

"Certainly, certainly," reassured the Garrulous Gourmet, "they just put those expiration times on to comply with some silly health inspector's rule. In actual fact, that grub is probably good forever, with all the preservatives they put in everything these days; so eat, drink, and be merry and tell the pax to do the same."

"You sure about that, boss?" asked Sam as he perused a ham sandwich with more than the usual skepticism before biting into it.

"No doubt about it," replied the AC with Avoirdupois, who—while appearing to be nonchalant—was carefully picking out only those items from his overripe repast which he felt reasonably certain couldn't spoil no matter how old they were.

The next two hours were totally uneventful as C.R. and company cruised along. The setting sun left a cobalt blue sky above, and moonlight reflected off the ocean cue below. Perfect field grade weather, mused the Peripetetic Position Reporter to himself as he finished relaying the most current AIREP. Sam was dozing fitfully in his seat, and in the dim light on the copilot's side of the console C.R. couldn't discern whether the expressions on his face were grimaces from the gas pains he had been complaining of ever since finishing his questionable consumables, or grins from a particularly pleasant dream. Not wanting to bother his snoozing sidekick, the Pudgy Programmer punched the last batch of way points into the INS and settled back in his seat to finish an interview he had been reading in a popular pulchritude-purveying periodical.

At about 170-west, the Eagle-Eyed Aeronaut began noticing telltale wisps of clouds passing overhead, and feeling little burbles of turbulence. Peering out the perspex, he made out

the shapes of a ghostly phalanx of clouds towering in the distance.

"Hey, Maximillian," he paged over the interphone to the engineer, "Wake up and crank up the radar; we've got some buildups ahead."

"I'm awake, sir, but if you'll remember, the radar is DNIF this leg," replied the sagatious gage gazer.

C.R. groaned softly to himself before keying the interphone again, "You're absolutely right, Mr. Engineer. But that's okay," he tried to reassure himself as well as the sergeant. "It's bright as day out there, and I'll just eyeball my way through." The words were barely out of C.R.'s mouth when the whole world went IFR, and the Starlifter began pitching and bucking like it had been dropped in a mix-master. Everything loose inside the cockpit ricocheted around and it was virtually impossible to read the instruments as the big jet alternately crunched everybody down in their seats as it was lifted and then hung them in the seatbelts with the gut-wrenching negative G-forces of each downdraft. Sam opened his eyes and managed to grab his empty flight lunch box just in time to prevent spraying the whole flight deck as his sour supper, assisted by the turbulence, overpowered his stomach. In the rear of the Starlifter, 20 passengers who had also eaten the out-of-limits lunches were suffering similar experiences. Sergeant Downs held out gallantly for a little while, trying to help the others as much as he could, but before long he succumbed and joined the barf bag brigade himself. C.R.'s caution had paid off and he didn't become airsick, but all he could do was hang on to the yoke, slow down the big jet as much as the book would allow and hope that the violent windshear didn't tear the wings off.

The unmerciful bouncing lasted for about 20 terrifying minutes and then subsided as suddenly as it had begun with the emergence of the helpless C-141 from the eastern edge of the squall line and into beautifully clear, moonlit skies once again.

"Ulp," was all sufferin' Sam could manage to answer the first three times the skipper asked him how he was doing. Finally, with a modicum of color beginning to replace the pallor in his cheeks, the copilot took stock of things. "Boss, did you notice that we're running about 25 minutes behind the flight plan?" Those weak tailwinds turned out to be pretty hefty headwinds the second half," he pointed out. "We may be a little close on fuel if this keeps up."

"Don't worry about a thing, m'boy," soothed the Field Grade Fumbler, "I've never had to ditch yet, and I don't plan to start with this trip. I have already taken care of our biggest problem by revising our destination ETA—don't wanna get a violation, ya' know."

Abeam French Frigate Shoals, C.R. checked in with Honolulu Center and received a clearance to SEIZE intersection

and then Victor 12 to Honolulu. Checking the flight plan against the clearance, Sam was puzzled. "How come they're clearing us via SEIZE when we filed via SQUAT, boss? Our INS shows us right on course."

"Well, either the INS is bonkers or Honolulu radar has made a mistake," said the Great Circle Gallavanter offhandedly. "I'll just give 'em a call and get a reading on our position."

"Roger MAC 00812," came the precise voice of the controller, "we show you ten miles north of SEIZE intersection at this time. Suggest a heading of 085. Are you having navigation difficulties?"

"Stand by please, Honolulu," stammered the suddenly Shook-up Charlatan, "we are checking out our INS." Returning his attention to the cockpit, C.R., who was beginning to sweat profusely, mumbled under his breath, "What I wouldn't give for Blinky right about now."

Ignoring his mentor's muddled mutterings, Sam had been diligently crosschecking between center's radar position, the flight plan, the enroute chart, and the INS. "I think I've got this figured out," he announced minutes later with an expression of both satisfaction and concern on his face. "I rechecked the waypoints and you set 21 degrees, 23 minutes North in for SQUAT instead of 20-23. That brought us in about 10 miles north of SEIZE, but as far as the INS was concerned we were right on course because it was flying what you told it to, boss. I reprogrammed it for the V-12 checkpoints, so we should be okay . . . except that I'm afraid we busted the ADIZ by a bunch of miles from the way we filed."

"Well, center didn't say anything about it when they called us, or when we called to confirm our position," offered the Overly Optimistic Operator. Maybe they won't notice or take offense this time."

"MAC 00812 this is Honolulu Center on 126.5, we show you right on centerline for V-12. What is the status of your INS?"

"Center, MAC 812, uh, we're, still checking it out," fibbed the Prince of Prevaricators in an effort to buy some time and perhaps reinforce the excuse of an INS with questionable credibility.

"Roger MAC 812, understand you are still not certain of your INS status at this time," replied the controller with a clipped trace of scorn in the tone of his voice. Fly heading 075, descend and maintain 10,000 feet at pilot's discretion, check altimeter 29.97, and give us a call on landline when you get to base ops—there's a little problem with your ADIZ penetration we need to discuss.

A pregnant silence pervaded the cockpit of 812 for several minutes. Finally, it was broken by the copilot. "Looks like they've got your number boss," he ventured.

"No sweat, Sam, we'll just tell 'em the INS was acting up and nobody will ever be the wiser. We'll let the black box take the rap. But I've learned a lesson; I'll *have* to be more careful when I'm performing my navigator duties and watch those numbers."

Seeing that his distance to Honolulu was getting critical for letdown, the Rotund Rascal called for the descent checklist, nosed the Starlifter over and barked on interphone, "Altimeter set, 29.79 . . . . "

# Quick Stoppers

## Dim Memory

Our Australian friends bring us this story through their *Aviation Safety Digest.* The system discussed is used on some MAC and aeroclub aircraft, but the lesson learned applies to all flyers.

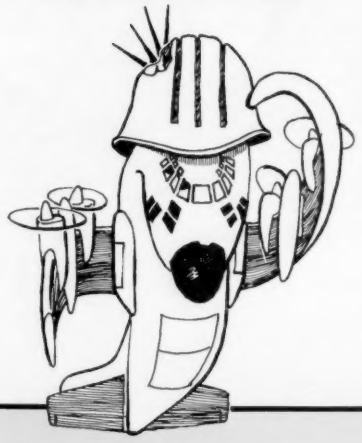
At the completion of a lengthy cross country flight that had begun at dawn, the pilot of a single-engine aircraft moved the landing gear knob to the down position and prepared for landing, but the green "down" lights didn't appear. The wheels were cycled but still the pilot could not see the green lights. He advised Flight Service of the situation, saying he would carry out further checks of the gear clear of the traffic pattern. These efforts proved unsuccessful, so he made two low passes over the Flight Service Unit and observers on the ground confirmed that the gear appeared to be down. Emergency services then stood by while the aircraft landed safely.

As frequently occurs in such cases, there was no fault in the gear indicating system. The pilot had simply forgotten that when the cockpit instrument lights are turned on, the indicator lights are automatically dimmed. On a bright day, it is then very difficult to see them. So next time you find your gear lights not illuminated when they should be, think about the automatic diming feature in your aircraft.

## *Helmet Save*

Sometimes it seems that the life support equipment we use is maximum protection against minimum danger. However, a recent mishap demonstrates the worth of safety gear.

After successfully finishing an airdrop, the C-130's loadmasters began reeling in the static lines from over the ramp using the static line retriever. Turbulent airflow around the ramp caused the static lines to



get tangled up with the Herk and the rapid increase in tension on the retriever cable caused it to snap. Flailing through the cargo compartment, the steel line struck the loadmaster. Fortunately the sergeant was wearing his helmet with the visor down. The headgear sustained significant damage from the metal whip, but the loadmaster was unharmed. The helmet probably saved his life.

## Discomfort Pallet

Just after takeoff a Starlifter crew noticed fumes in their cockpit. An extra flight engineer went to the crew rest facility aft of the flight deck to investigate. At the same time, the loadmaster smelled something strange and noticed smoke coming from the comfort pallet that was locked into the forward pallet position, almost under the crew loft. The AC decided to divert back to the departure base and check things out on the ground.

Meanwhile, the engineer got a strong whiff of bad gasses and returned to the cockpit not feeling too well—but the 141 was on final approach so he sat it out. After the Starlifter taxied clear of the runway the crew and passengers quickly egressed. One crewmember administered oxygen from a walk-around bottle to the ailing engineer until the medics arrived.

A check of the comfort pallet turned up a burned transformer on a coffee brewer which caused the fumes. An improper fuse installed in the pallet's electrical system allowed too much juice to the java brewer.

At the hospital, the flight engineer was treated for a physiological reaction to the noxious fumes which had caused inhalation bronchitis. Using oxygen while checking out the unusual odors might have saved the engineer a discomforting experience.

## Tarred and Fettered

You may or may not believe that smoking is hazardous to your health, but how about your aircraft? If you think the machines we fly are immune to the effects of smoking consider the experience of this Sabreliner crew.

Just after passing FL 350 the CT-39's cabin altitude jumped to about 9,000 feet and the emergency oxygen system functioned as advertised—sounding a warning horn and deploying the passenger oxygen masks. The crew began an immediate descent, but leveled off at FL 330 when they noticed the problem wasn't getting any worse. After about one minute, however, the cabin altitude elevated through 10,000 feet and kept on climbing. The pilot put the mini-liner into an immediate descent while his cohort in climb declared an emergency. On the way down to FL 250 the cabin altitude stabilized at 23,000 feet with the altimeter showing FL 250. Suddenly, the normal pressurization system started working properly, returning the cabin altitude to 7,000 feet.

After landing at the destination air base, investigators found the cabin pressure regulator valve severely contaminated with tar and nicotine. The gummy substance fouled the valve and caused it to operate irratically.

# Qs

## Unsafe Side-Kicks

The combat SAR exercise was being conducted in a heavily forested area. An A-7, "Sandy," vectored the HH-53 rescue helicopter toward a simulated survivor located in a clearing adjacent to a small river. The pilot brought the Super Jolly Green to a hover and sent a pararescue specialist down the hoist to assist the "distressed airman." After both were pulled back aboard and were safely inside, the hoist operator notified the pilot that the recovery was complete. Suddenly, while still in a hover, the aircraft experienced two severe yaw-kicks accompanied by a slight roll. The pilot immediately called for the copilot to turn off the automatic flight control yaw/altitude control. But before this could be done, the helicopter shuddered from another violent side shuffle, putting the rotor blade tips into some tree branches along the edge of the clearing. The side-kicks stopped as soon as the yaw channel was turned off and the pilot reestablished a stable hover. No unusual noises or vibrations were noted so the crew flew the aircraft back to base without any further problems. Besides damage to three of the rotor blade tip-caps caused by the encounter with tree branches, a maintenance inspection later found a broken electrical wire on the vertical gyro which caused the malevolent inputs to the yaw control.

## TOLD Ya

How close do you figure your TOLD card? Do you say, "Plus or minus a couple of knots is close enough"? Probably so, but a Hercules crew found out the hard way how costly larger errors can be. They planned a no-flap full-stop landing to complete the pilot's check ride and the engineer computed and posted the landing data. The pilots "checked" the numbers as called for in the checklist. Unknown to them, the center-seater made a 10-knot error when he transcribed the no-flap touchdown speed onto their TOLD card.

The pilot smoothly guided the C-130 down the glidepath and flawlessly held the computed approach and threshold speeds; everything looked normal until the flare. When the left-seater retarded the throttles to get touchdown speed, the Herk suddenly dropped about 10 feet to the runway. The landing damaged the tailskid, urinal drains and various parts of the ramp. After the sheet metal work and painting were done the 10-knot error had cost about $1,400.

## Notable Quote

The man who won't read has very little advantage over the man who can't read.

# AFTER DEADLINES

WHEN THE DUST FINALLY SETTLED at the annual American-Canadian Search and Rescue Exercise (SAREX), U.S. rescue units had won all five of the awards given. The 303d ARRS (AFRES) from March AFB, California, walked away with four out of the five laurels, including team parachute jumping and search and rescue. The 41st ARRS from McClellan won the coveted Sullivan Cup for first place in the medical exercise. Despite the keen competition provided by our Canadian friends, this marked the best showing ever by an American SAREX team.

A TRAVIS C-5 GALAXY recently airlifted a huge oil pumping station from Ohio to Alaska. Once assembled at Prudhoe Bay, the 100-ton station will pump an added 160,000 barrels of crude oil per day through the Alaskan pipeline. The C-5 is the only airlifter with enough capacity to haul such an enormous piece of equipment.

USAF HONORS FIRST DIRECTOR OF FLIGHT SAFETY with dedication of the "Bertrandias Room" at AFISC. Maj Gen Victor E. Bertrandias headed the USAF's flight safety program from 1950 through 1954, reducing the major aircraft accident rate per 100,000 flying hours from 36 to 10. A member of the 94th Pursuit Squadron (the Hat-in-the-Ring outfit), General Bertrandias served with Eddie Rickenbacker during WW I. His personal awards, decorations, log books, and other memorabilia are on display at the Center.

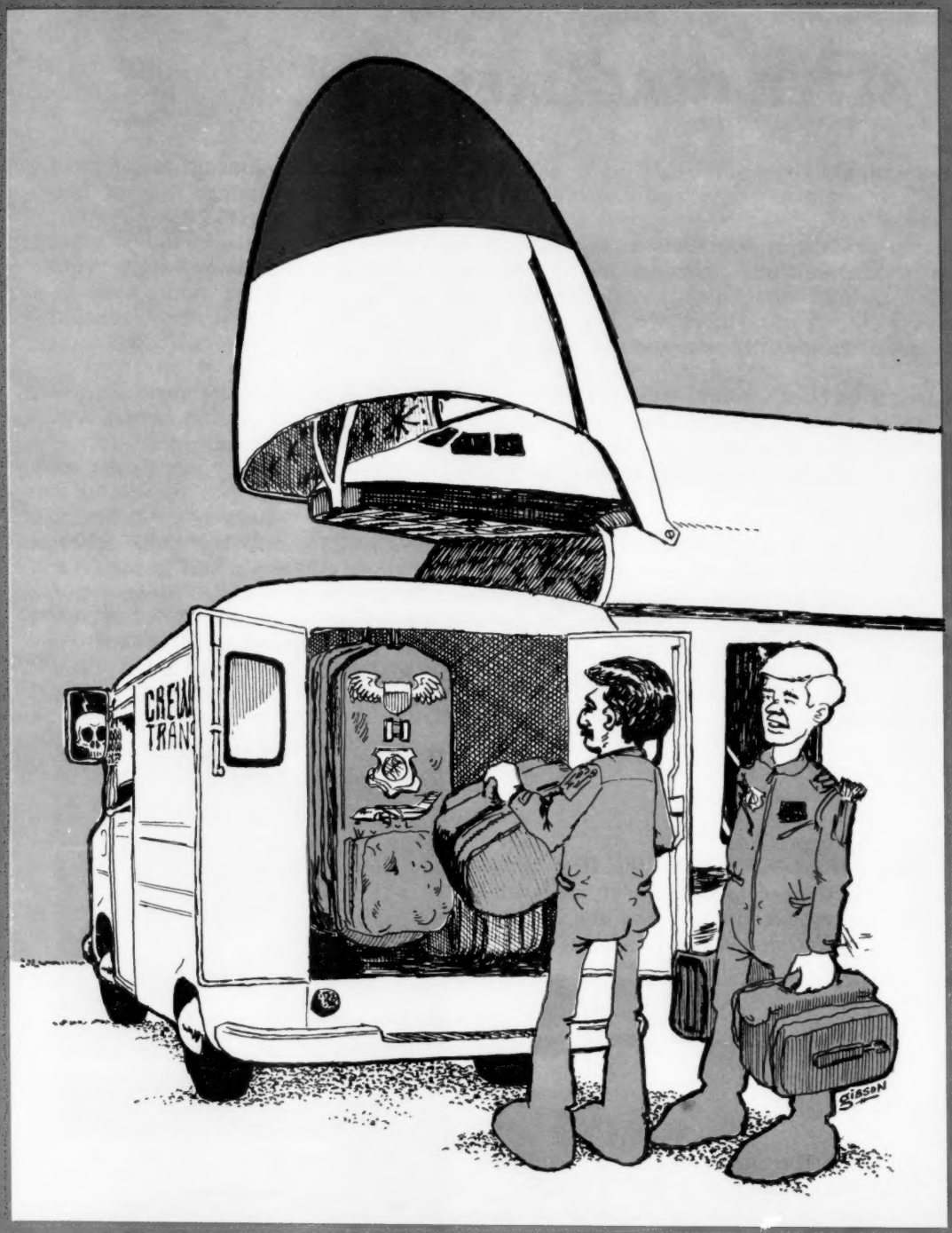
BEFORE: This is how the first production C-141 B-model appeared after being separated and before insertion of the plugs that add some 23 feet to its length.

AFTER: The first production B-model rolls out of the Lockheed-Georgia plant to undergo final structural and flight testing.

WATCH FOR the results of TMF's readership survey in the November issue.



U.S. GOVERNMENT PRINTING OFFICE: 1979-665-013/5




*I heard a rumor crew transport is going to skeleton crews on weekends.*